

CLAIMS

What is claimed is:

1. A method, comprising:
examining a packet to determine if the packet contains extensible markup language (XML)-related content;
if any XML-related content is determined to be present, matching that XML-related content to a rule; and
determining an action to undertake with regards to the packet based on the matching rule.
2. The method of claim 1 wherein determining the action to undertake includes determining which server to forward the packet.
3. The method of claim 1 wherein examining the packet includes at least one of examining a header of the packet and examining a body of the packet.
4. The method of claim 1 wherein examining the packet includes reading the packet to determine if any at least one of an XML tag and an XML attribute is present therein.
5. The method of claim 1 wherein examining the packet includes examining a request to determine if the request includes an indication of an XML representation of a resource being requested.
6. The method of claim 1 wherein examining the packet includes examining a hypertext transfer protocol (HTTP) packet.

7. The method of claim 6 wherein examining the HTTP packet includes examining a simple object access protocol (SOAP) message in the HTTP packet to determine if the SOAP message encapsulates XML-related content.

8. The method of claim 1, further comprising decrypting the packet prior to examining the packet.

9. The method of claim 1 wherein examining the packet includes examining XML root and node elements of the packet to identify content that can be matched to at least one rule.

10. The method of claim 1, further comprising defining a plurality of simple rules that can be related to one another to form a complex rule, wherein at least one of the simple rules is specific to XML-related content.

11. The method of claim 1, further comprising performing the action, including at least one of performing a delayed binding operation and buffering packets until information for load balancing is received, load balancing multiple XML applications, differentiating service of packets based on their XML-related content, and prioritizing transactions based on XML-related content of packets.

12. The method of claim 1, further comprising:
examining the packet to identify non-XML-related content;
matching the non-XML-related content to corresponding rules; and
determining the action to undertake based on the rules corresponding to the XML-related content and to the non-XML-related content.

13. A method, comprising:

examining a packet to identify indicia present therein that is associated with a structured document format;

comparing data from the indicia with a set of rules to identify at least one of the rules that matches that data; and

undertaking an action with regards to the packet based on a rule that matches the data.

14. The method of claim 13 wherein examining the packet to identify indicia present therein that is associated with the structured document format includes examining a packet having XML-related content present therein.

15. The method of claim 14 wherein examining the packet to identify indicia includes examining at least one of header and body portions of the packet to locate either or both an XML tag and an XML attribute.

16. The method of claim 15 wherein comparing the data from the indicia includes at least one of comparing a string in either or both the XML tag and XML attribute, or comparing a string marked by either or both the XML tag and XML attribute, with the set of rules.

17. The method of claim 13, further comprising defining a set of commands that specify a manner in which the structured document format is to be examined.

18. The method of claim 13, further comprising:
defining a plurality of first rules, at least some of which are associated with the structured document format and at least some of which are not associated with the structured document format;

defining a plurality of second rules, at least some of which are made up of several first rules; and

specifying an action to undertake for each of the second rules, if content of packets match the second rules.

19. An article of manufacture, comprising:

a machine-readable medium having instructions stored thereon to:

examine a packet to identify indicia present therein that is associated with a structured document format;

compare data from the indicia with a set of rules to identify at least one of the rules that matches that data; and

undertake an action with regards to the packet based on a rule that matches the data.

20. The article of manufacture of claim 19 wherein the instructions to examine the packet to identify indicia present therein that is associated with the structured document format includes instructions to examine a packet having XML-related content present therein.

21. The article of manufacture of claim 19 wherein the machine-readable medium further includes instructions stored thereon to:

specify a plurality of first rules, at least some of which are associated with the structured document format in the form of XML and at least some of which are not associated with XML;

specify a plurality of second rules, at least some of which are made up of several first rules; and

specify an action to undertake for each of the second rules, if content of packets match the second rules.

22. A system, comprising:
a means for examining a packet to determine if the packet contains extensible markup language (XML)-related content;
a means for matching that XML-related content to a rule, if any XML-related content is determined to be present; and
a means for determining an action to undertake with regards to the packet based on the matching rule.

23. The system of claim 22 wherein the means for examining the packet includes at least one of a means for examining a header of the packet and a means for examining a body of the packet, such means for examining the header and body of the packet including at least one of a means for reading the packet to determine if any at least one of an XML tag and an XML attribute is present therein.

24. The system of claim 22, further comprising a means for processing the packet if the packet includes encrypted content.

25. The system of claim 22, further comprising:

26. The system of claim 22, further comprising:
a means for examining the packet to identify non-XML-related content;
a means for matching the non-XML-related content to corresponding rules; and
a means for determining the action to undertake based on the rules corresponding to the XML-related content and to the non-XML-related content.

27. The system of claim 22, further comprising a means for performing the action, including at least one of:
a means for performing a delayed binding operation;

a means for load balancing multiple XML applications;
a means for differentiating service of packets based on their XML-related content; and
a means for prioritizing transactions based on XML-related content of packets.

28. An apparatus, comprising:
a processor;
a first element under control of the processor to examine a packet to determine if the packet contains extensible markup language (XML)-related content;
a second element under control by the processor to match that XML-related content to a rule if any XML-related content is determined to be present;
and
a third element under control by the processor to determine an action to undertake with regards to the packet based on the matching rule.

29. The apparatus of claim 28, further comprising a decryption device to decrypt encrypted XML-related content of the packet.

30. The apparatus of claim 28, further comprising a data structure accessible by the processor to store rules that specify actions to undertake if certain XML-related content is present in packets.

31. The apparatus of claim 30 wherein the data structure stores rules that are non-XML-related content, the first element being capable to examine the packet for the non-XML-related content, the second element being capable to match the non-XML-related content of the packet to at least one corresponding rule, the third element being capable to determine the action to undertake based on an evaluation of a

combination of rules pertaining to XML-related content and non-XML-related content present in the packet.